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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,060	10/03/2003	Hong-Suk Yoo	10125/4121	1615

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EXAMINER	
FERGUSON, MARISSA L	

ART UNIT	PAPER NUMBER
2854	

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 10/679,060	**Applicant(s)** YOO ET AL.
	Examiner Marissa L Ferguson	**Art Unit** 2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 October 2003*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-28* is/are rejected.
7)☒ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *03 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☒ All b)☐ Some * c)☐ None of:
1.☒ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/03/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,16 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Streibig (US Patent 6,488,376).

Regarding claim 1, Streibig teaches a method of providing a plurality of clichés (30) in which grooves (32,34,36,38) are formed, each groove having one of a color ink and opaque material (Column 2, Lines 24-39), transferring the color inks in the clichés onto a substrate to form a color filter and transferring the opaque material in a first cliché onto the substrate of the color filter (Column 3, Lines 41-52 and Figures 4a-4e show the steps of transferring ink from grooves and depositing it on the substrate 22).

Regarding claim 16, Streibig teaches removing at least one of excess color inks and opaque material from the grooves in the clichés prior to transferring the color inks in the clichés onto the substrate (Column 2, Lines 28-34 and Figure 4a).

Regarding claim 21, Streibig teaches supplying the color inks to the grooves (Column 2, Lines 16-24).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2,3-8 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Streibig (US Patent 6,488,376) in view of Yamashita et al. (US Patent 5,335,595).

Regarding claims 2, Striebig teaches the claimed invention, however he does not explicitly disclose removing color ink present on a transfer apparatus such as a printing roller in order to transfer the color inks in the clichés onto a new substrate prior to new color ink being transferred to the transfer apparatus.

The examiner notes that it should be obvious to clean a roller after every use and before applying another color in order to provide an intricate and precise pattern on a substrate. Regarding a printing roller, Yamashita et al. teaches a printing roller that rolls ink on a substrate (Figures 8a-8c). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by Streibig to include a printing roller as taught by Yamashita et al., since Yamashita et al. teaches that it is advantageous to provide a printing roller in order to efficiently and accurately print each and every ink on a substrate.

Regarding claim 3-5 and 8, Streibig teaches the claimed invention, however he does not explicitly disclose transferring inks onto a surface of a printing roller, transferring the inks on the printing roller to the substrate, rolling a print roller on a cliché and transferring the inks from on the printing roller to the substrate comprising the step of rolling the printing roller containing inks on the substrate. Yamahita et al. teaches a plate (6) containing ink (20) in the grooves (21), wherein transferring the ink from grooves includes using a roller transfer drum (element 1 serves as a printing roller) to pick up the inks (20) from the grooves (21 and Figures 8a-8c) of the plate (6) and transfers the ink to a work plate (element 7 serves as a substrate and Column 1, Lines 5-10, Column 6, Lines 20-38, Lines 50-55, Lines 65-68 and Column 7, Lines 1-4). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by Streibig to include a method of transferring ink using a printing roller as taught by Yamashita et al., since Yamashita et al. teaches that it is advantageous to provide a printing roller in order to efficiently and accurately print on a substrate.

Regarding claims 6,7 and 25 Striebig teaches the claimed invention, however he does not explicitly disclose transferring each of the color inks from the groove of each cliché onto a surface of a printing roller, each cliché containing only one of the color inks and transferring the color inks to the substrate, the printing roller containing only a single color ink each time the printing roller is rolled on the substrate. Striebig at least teaches using a tamp pad to tamp one color at a time from a plurality of clichés (Column 5, Lines 36-64). Therefore, since Striebig has a plurality of clichés it would have been obvious at the time the invention was made to a person having ordinary skill in the art to use Striebig for transferring each of the color inks from the groove of each cliché, since Striebig teaches pad printing different color inks to achieve patterns of high resolution.

Regarding a printing roller, Yamashita et al. teaches a printing roller that rolls ink on a substrate (Figures 8a-8c). Also, the examiner notes that the reference does not specifically claim a supplying container, however it is obvious that the device must have a supply container for supplying inks.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by Streibig to include a printing roller as taught by Yamashita et al., since Yamashita et al. teaches that it is advantageous to provide a printing roller in order to efficiently and accurately print each and every ink on a substrate.

3. Claims 9,10,19-20 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Streibig (US Patent 6,488,376) in view of Evans et al. (US Patent 5,514,503).

Regarding claims 9 and 10, Streibig teaches the claimed invention however, he does not explicitly disclose hardening a color filter and opaque material after forming the color filter on the substrate and applying at least one of UV radiation and heat to harden the color filter. Evans et al. teaches printing a color filter and opaque material using a hardener and applying an ultraviolet radiation to heat a color filter (Column 5, Lines 48-56 and Column 6, Lines 14-32). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by Streibig to include a hardener and ultraviolet radiation as taught by Evans et al., since Evans et al. teaches that is advantageous to cure and set the inks in order to perform an efficient embossing operation.

Regarding claims 19-20, Streibig teaches the claimed invention with the exception of transferring all of the color inks to the substrate on a single transfer apparatus and disposing all of the color inks on the transfer apparatus at the same time. Evans et al. teaches a method of transferring inks to a substrate with a single transfer apparatus (16) and transferring at the same time (Column 7, Lines 64-67 and Column 8, Lines 1-11). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by Streibig to include transferring inks on a single transfer apparatus and at the same time as taught by Evans et al., since Evans et al. teaches that it is advantageous to provide a uniform and smooth color filter layer.

4. Claims 11-14,15,17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Streibig (US Patent 6,488,376) in view of Evans et al. (US Patent 5,514,503) as applied to Claim 1 above, further in view of Yamashita et al. (US Patent 5,335,595).

Regarding claims 11-13 and 15, Streibig teaches the claimed invention with the exception of transferring the opaque material to a surface of a printing roller, transferring the opaque material to a boundary area between the color inks (such as red, green and blue inks) forming the color filter and provides plurality of supply rollers. Evans et al. teaches transferring a black material (element 10 serves as opaque material) to a boundary area between the color inks (36 and Column 6, Lines 7-13) in order to form a color filter with opaque material in between (Figure 4 and Column 9, Lines 2-18 and Column 6, Lines 14-32) and providing plurality of ink supplying rollers (54,56).

However, he does explicitly disclose using a printing roller to pick up ink from a cliché and depositing ink on a substrate. Yamashita et al. teaches a printing roller that rolls ink on a substrate (Figures 8a-8c).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the invention as taught by Streibig to include to deposit an opaque material between colored inks as taught by Evans et al., since Evans et al. teaches that it is desirable to deposit a flat layer of color and black in order to provide high quality, uniform thickness and to improve resolution and to include a printing roller as taught by Yamashita et al., since Yamashita et al. teaches that it is advantageous to provide a printing roller in order to efficiently and accurately print each and every ink on a substrate.

Regarding claim 14, Streibig teaches the claimed invention however, he does not explicitly disclose hardening a color filter and opaque material after forming the color filter on the substrate and applying at least one of UV radiation and heat to harden the color filter. Evans et al. teaches printing a color filter and opaque material using a hardener and applying an ultraviolet radiation to heat a color filter (Column 5, Lines 48-56 and Column 6, Lines 14-32). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by Streibig to include a hardener and ultraviolet radiation as taught by Evans et al., since Evans et al. teaches that is advantageous to cure and set the inks in order to perform an efficient embossing operation.

Regarding claim 17, Streibig teaches removing at least one of the excess color inks and opaque material from the clichés prior to transferring the color inks in the clichés onto the substrate (Column 2, Lines 28-34 and Figure 4a).

Regarding claim 18, Streibig teaches moving a blade (62) along the clichés such that the grooves are substantially filled by the at least one of the color inks and opaque material to remove at least one of the excess color inks and opaque material, wherein the filled grooves are substantially planar with a remainder of the clichés, and the at least one of the color inks and opaque material on the surface of the clichés not in the grooves are removed (Figure 4a and Column 5, Lines 64-67).

5. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Streibig (US Patent 6,488,376) in view of Bocko et al. (US Patent 5,544,582).

Streibig teaches the invention claimed, however he does not explicitly disclose providing a plurality of rollers, imparting at least one of the color inks to an ink supply roller and rolling each roller on only one cliché. Bocko et al. teaches a plurality of rollers (52,54,56 and 58) and supplying at least one of the color inks from an ink source (60) to an ink supply roller (Figure 9) and rolling each roller on one plate (72 and Figure 8). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention as taught by Streibig to include a plurality of rollers for applying at least one of a color ink to an ink supply roller as taught by Bocko et al., since Bocko et al. teaches that is advantageous to thoroughly coat a roller in order to provide an accurate pattern to a substrate.

6. Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Streibig (US Patent 6,488,376) in view of Evans et al. (US Patent 5,514,503) and Yamashita et al. (US Patent 5,335,595).

Regarding claims 26 and 27, Streibig teaches the claimed invention including supplying clichés with color inks, transferring a first, second, third and opaque (Column 2, Lines 24-39) colored inks from grooves of first, second and third clichés (30) and transferring first, second and third colored inks onto a substrate (Column 3, Lines 41-52 and Figures 4a-4e show the steps of transferring ink from grooves and depositing it on a substrate 22) forming a color filter, transferring the opaque material to a boundary area between the color inks (such as red, green and blue inks) forming the color filter and provides plurality of supply rollers, transferring using a printer roller and removing color ink present before applying a new ink color. Evans et al. teaches transferring a black material (element 10 serves as opaque material) to a boundary area between the color inks (36 and Column 6, Lines 7-13) in order to form a color filter with opaque material in between (Figure 4 and Column 9, Lines 2-18 and Column 6, Lines 14-32) and providing plurality of ink supplying rollers (54,56). However, he does explicitly disclose using a printing roller to pick up ink from a cliché and depositing ink on a substrate. Yamashita et al. teaches a printing roller that rolls ink on a substrate (Figures 8a-8c).

Regarding removing an ink, the examiner notes that it should be obvious to clean a roller after every use and before applying another color in order to provide an intricate and precise pattern on a substrate

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the invention as taught by Streibig to include to deposit an opaque material between colored inks as taught by Evans et al., since Evans et al. teaches that it is desirable to deposit a flat layer of color and black in order to provide high quality, uniform thickness and to improve resolution and to include a printing roller as taught by Yamashita et al., since Yamashita et al. teaches that it is advantageous to provide a printing roller in order to efficiently and accurately print each and every ink on a substrate.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa L Ferguson whose telephone number is (571) 272-2163. The examiner can normally be reached on (M-T) 6:30am-4:00pm and every other (F) 7:30am-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marissa L Ferguson
Examiner
Art Unit 2854

MLf
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